

MPE Calculation page

Garmin		Model: Area 795/796	Test Number:	110505			
MPE Calculator	MPE uses EIRP for calculation. EIRP is based on TX power added to the antenna gain in dBi.						
	dBi = dB gain compared to an isotropic radiator.						
	S = power density in mW/cm ²						
		Output Power		dBd + 2.17 = dBi	Antenna Gain (dBi)	1	
		Maximum (Watts)	0.000583		dBi to dBd	2.2	
Tx Frequency (MHz)	2441				Antenna Gain (dBd)	-1.17	
Cable Loss (dB)	0.0	(dBm)	-2.34		Antenna minus cable (dBi)	1.00	
	Calculated ERP (mw)	0.446		EIRP = Po(dBM) + Gain (dB)			
	Calculated EIRP (mw)	0.735			Radiated (EIRP) dBm	-1.340	
				ERP = EIRP - 2.17 dB			
	Occupational Limit	<div style="border: 1px solid black; padding: 5px;"> Power density (S) EIRP ----- = mW/cm² 4 π r² r (cm) EIRP (mW) </div>				Radiated (ERP) dBm	-3.510
	5.00000 mW/cm ²						
	50.00000 W/m ²						
	General Public Limit						
	1.00000 mW/cm ²						
	10.00000 W/m ²						
FCC radio frequency radiation exposure limits per 1.1310							
	Frequency (MHz)	Occupational Limit	Public Limit				
	300-1,500	f/300	f/1500				
	1,500-10,000	5	1				
FCC radio frequency radiation exposure limits per 1.1310							
	Frequency (MHz)	Occupational Limit @ Tx Freq	Public Limit @ Tx Freq (mW/cm ²)				
	300-1,500 (mW/cm ²)	8.136666667	1.627333333				
	300-1,500 (W/m ²)	81.366666667	16.273333333				
	1,500-10,000 (mW/cm ²)	5	1				
	1,500-10,000 (W/m ²)	50	10				
EIRP	S	S	Distance	Distance	Distance	Distance	
milliwatts	mW/cm ²	W/m ²	cm	meter	inches	Feet	
0.735	0.00058	0.00585	10.00	0.10	3.94	0.01	
0.735	0.00072	0.00722	9.00	0.09	3.54	0.01	
0.735	0.00091	0.00913	8.00	0.08	3.15	0.01	
0.735	0.00119	0.01193	7.00	0.07	2.76	0.01	
0.735	0.00162	0.01624	6.00	0.06	2.36	0.01	
0.735	0.00234	0.02338	5.00	0.05	1.97	0.00	
0.735	0.00365	0.03653	4.00	0.04	1.57	0.00	
0.735	0.00649	0.06495	3.00	0.03	1.18	0.00	
0.735	0.01461	0.14613	2.00	0.02	0.79	0.00	
0.735	0.05845	0.58451	1.00	0.01	0.39	0.00	
0.735	0.07216	0.72161	0.90	0.009	0.35	0.001	
0.735	0.09133	0.91329	0.80	0.008	0.31	0.001	
0.735	0.11929	1.19287	0.70	0.007	0.28	0.001	
0.735	0.16236	1.62363	0.60	0.006	0.24	0.001	
0.735	0.23380	2.33803	0.50	0.005	0.20	0.000	
0.735	0.36532	3.65317	0.40	0.004	0.16	0.000	
0.735	0.64945	6.49453	0.30	0.003	0.12	0.000	
			Occupational Limit minimum Distance (meters)	Occupational Limit minimum Distance (cm / inches)	Public Limit minimum distance (meters)	Public Limit minimum distance (cm / inches)	
		Frequency (MHz)					
		300-1,500	N/A	N/A	N/A	N/A	
		1,500-10,000	N/A	N/A	N/A	N/A	